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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,294	01/11/2001	Kouji Sakai	YAMAH5.778A	2802

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KNOBBE MARTENS OLSON & BEAR LLP
620 NEWPORT CENTER DRIVE
SIXTEENTH FLOOR
NEWPORT BEACH, CA 92660

EXAMINER
BURCH, MELODY M

ART UNIT	PAPER NUMBER
3683	

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/759,294	SAKAI, KOUJI	
	Examiner	Art Unit	
	Melody M. Burch	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *3,6-13,20,25-27,30,34 and 36-39* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,5,15-19,21-24,28,29,31-33,35 and 40* is/are rejected.

7)☒ Claim(s) *2 and 14* is/are objected to.

8)☒ Claim(s) *3,6-13,20,25-27,30,34 and 36-39* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 June 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER
4/26/02

DETAILED ACTION

1. Examiner is unclear as to Applicant's purpose for submitting applications having attorney docket numbers of: YAMAH4.985A, YAMAH5.770A, YAMAH5.754A. Clarification is required.

Drawings

2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "160" has been used to designate both the third oil chamber in figure 6 and the gas chamber in figure 5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Election/Restrictions

4. Applicant's election without traverse of Species II in Paper No. 9 is acknowledged.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 29, 31-33, 35, and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 29. The phrase "a throttle" in line 1 is indefinite. It is unclear to the Examiner whether the throttle claimed in claim 29 is different from that claimed in claim 28. Examiner recommends amending the claim to read --a second throttle-- if the throttle is intended to be different from that of claim 28.

Re: claim 31. The phrase "said at least one chamber" in line 9 is indefinite. It is unclear to the Examiner whether the at least one chamber claimed in line 9 is intended to be the same or different from the "at least two fluid chambers" of each of the dampers claimed in lines 3-4 of claim 31. Clarification is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 17-19, 21, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai '018.

Re: claims 17–19. Sakai shows in figure 38 a suspension system comprising a first damper FrLH, a second damper FrRH, a third damper RrLH, and a fourth damper RrRH, the first damper and the second damper forming a first damper pair and the third

damper and the fourth damper forming a second damper pair, the first damper pair and the second damper pair being fluidly connected through means 616 for regulating flow into and out of the first damper pair and the second damper pair.

Re: claim 21. Figure 40 of Sakai '018 shows the limitation of the first pair of dampers comprising a front left damper and rear right damper.

Re: claim 22. Figure 39 of Sakai '018 shows the limitation of the first pair of dampers comprising a front left damper and rear left damper.

9. Claims 23, 24, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Tschanz.

Re: claim 23. Tschanz shows in figure 1 a suspension system comprising a first movement restricting portion, right-side front damper, and a second movement restricting portion, right-side rear damper, the first movement restricting portion and the second movement restricting portion being interconnected by a fluid passage as shown, a flow regulator shown in the area of element number 27 being in fluid communication with the fluid passage, the flow regulator having a fluid chamber 28,34 and a movable wall 31.

Re: claim 24. Tschanz shows in figure 1 the limitation in which the fluid chamber communicates with the fluid passage through a throttle shown in the area of element number 16.

Re: claim 28. Tschanz shows in figure 1 the limitation in which the system further comprises a throttle shown in the area of element number 16 positioned along

the fluid passage between the flow regulator and at least one of the first movement restricting portion and the second movement restricting portion.

Re: claim 29. Tschanz shows in figure 1 the limitation in which the system further comprises a throttle shown in the area of element number 9 positioned along the fluid passage between the flow regulator and another of the at least one of the first movement restricting portion and the second movement restricting portion.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1, 4, 5, 15, 16, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai '018.

Re: claims 1, 15, and 31. (First Interpretation) Sakai '018 shows in figures 2 and 3 a suspension system for a four wheeled vehicle as disclosed in line 3 of the abstract, the suspension system comprising a first damper left-side 102, a second damper right-side 102, each of the dampers comprising a cylinder body 103 and a piston 105 arranged to reciprocate within the damper, each piston dividing an interior of each cylinder body into an upper chamber 107 and a lower chamber 106, each piston also comprising a connecting passage 109 that places the upper chamber and the lower chamber in fluid communication, the lower chamber of the first damper and the lower

chamber of the second damper being interconnected with a pressure regulator 115, the pressure regulator as shown in figure 3 comprising a first pressure regulating chamber 148 and a second regulating chamber 155, a first movable wall left-side 122 defining at least a portion of the first pressure regulating chamber and a second movable wall right-side 122 defining at least a portion of the second pressure regulating chamber, the lower chamber of the first damper being connected to the first pressure regulating chamber and the lower chamber of the second damper being connected via element 117 to the second pressure regulating chamber, a passage (shown in the area of element number 133 through which element 132 passes) extending between the first pressure regulating chamber and the second pressure regulating chamber, the pressure regulator further comprising a third pressure regulating chamber 129, a flow regulator 117 containing a first flow regulating chamber 145 and a second flow regulating chamber 146, but does not show the third and fourth dampers and the connecting relationship of the third and fourth dampers with the flow regulator.

Figure 19 of Sakai '018 teaches the use of a suspension system having first and second dampers connected to a pressure regulator 115 and a flow rate regulator 251 as well as third and fourth dampers (bottom left and right elements 102) in a connecting relationship with the flow rate regulator 251. More specifically, Sakai '018 figure 19 teaches the use of a third pressure regulating chamber as labeled by Examiner in a copy of figure 19 being connected with the third damper via the first pressure regulating chamber and the movable wall of the first regulating chamber and the fourth damper through at least a first conduit, a flow regulator 251 containing a first flow regulating

chamber and a second flow regulating chamber as labeled by Examiner in the copy of figure 19, the first flow regulating chamber and the first conduit in communication though a throttled passage. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the suspension system having pressure and flow regulator connections particular to two wheel dampers as shown in Sakai '018 figure 2 to have included connections to all four wheel dampers, as taught by Sakai '018 figure 19, in order to provide the well-known means of optimal control for both roll and pitch of the vehicle.

Re: claims 1, 15, 16, and 31. (Second Interpretation) Sakai '018 shows in figure 19 (all elements are labeled by Examiner in the attached copy of figure 19) a suspension system for a four wheeled vehicle as disclosed in line 3 of the abstract, the suspension system comprising a first damper, a second damper, a third damper, and a fourth damper, each of the dampers comprising a cylinder body and a piston arranged to reciprocate within the damper, each piston dividing an interior of each cylinder body into an upper chamber and a lower chamber, each piston also comprising a connecting passage that places the upper chamber and the lower chamber in fluid communication, the lower chamber of the first damper and the lower chamber of the second damper being interconnected with a pressure regulator, the pressure regulator comprising a first pressure regulating chamber and a second regulating chamber, a first movable wall defining at least a portion of the first pressure regulating chamber and a second movable wall defining at least a portion of the second pressure regulating chamber, the lower chamber of the first damper being connected to the first pressure regulating

chamber and the lower chamber of the second damper being connected to the second pressure regulating chamber, the pressure regulator further comprising a third pressure regulating chamber, the third pressure regulating chamber being connected with the third damper and the fourth damper through at least a first conduit via the first and second pressure regulating chambers and the respective movable walls, a flow regulator containing a first flow regulating chamber and a second flow regulating chamber, the first flow regulating chamber and the first conduit in communication through a throttled passage, but does not disclose the limitation of a passage extending between the first pressure regulating chamber and the second pressure regulating chamber of the pressure regulator.

More specifically, Sakai '018 figure 19 shows a pressure regulator having a U-shaped member comprising the movable walls for the first and second pressure regulating chambers on either leg of the U-shaped member. Sakai '018 figure 3 teaches a well-known alternate means of constructing a pressure regulating including the use of a U-shaped member left-side 127,128, right-side127 comprising the movable walls left and right-side 122 for first 148 and second 155 pressure regulating chambers on either leg of the U-shaped member. Sakai '018 figure 3 also teaches the U-shaped support member being supported in the in the pressure regulating housing by a rod 132 and rod guide member 134 having a passage, which is located and extends between the first and second regulating chambers, shown in the area of element number 133 through which the rod passes during reciprocating motions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the

pressure regulator of Sakai '018 figure 19 with a pressure regulator, as taught by Sakai '018 figure 3, in order to provide an alternate and effective means of guiding the movable walls during the reciprocating motion in the pressure regulating chamber.

Re: claim 4. Sakai '018 discloses in col. 5 lines 35-37 the limitation of the first damper being a front left damper and the second damper being a rear left damper.

Re: claim 5. Sakai '018 discloses in col. 5 lines 35-37 and teaches in figure 18 the limitation of the first damper being a front left damper and the second damper being a rear right damper. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the suspension system of Sakai '018 figure 19 with a cross-connection feature such that the fourth damper adapts a connection relationship similar to that of the second damper, as taught by Sakai '018 figure 18, as a means of providing an arrangement that combats both rolling pitching and a combination of those forces as taught in col. 14 lines 60-61 of Sakai '018.

Allowable Subject Matter

12. Claims 2 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claims 32, 33, 35, and 40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

14. In order to complete the record, it should be noted that no conflict appears to presently exist between the subject matter defined by the instant claims and the subject matter of the claims of applicant's and/or assignee's Patent 6250658 to Sakai has been made of record. Accordingly, no double patenting rejection is entered into the instant application. See MPEP 804+ concerning double patenting type of rejections, if necessary. Applicant and/or assignee should maintain this clear line of patentable distinction between the instant claims and the claims of the indicated patent application.

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents: 6250658 to Sakai teaches in the prior art section the use of various arrangements of the suspension to provide pitch and roll control, 5562305 to Heyring, 4371182 to Brown, 4295660 to Toti et al., 6010139 to Heyring et al., 5040823 to Lund, 5020826 to Stecklein et al., 3032349 to Fiala, and 3024037 to Fiala teach the use of 4-damper suspension systems, 6024366 to Masamura, 3736000 to Capgras, 4251088 to Shyu, and Japanese Patents: JP-443113 and JP-4103422 and JP-10250340 teach similar suspension systems.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone numbers

for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb
April 19, 2002

CHRISTOPHER P. SCHWARTZ
PRIMARY EXAMINER
4/20/02